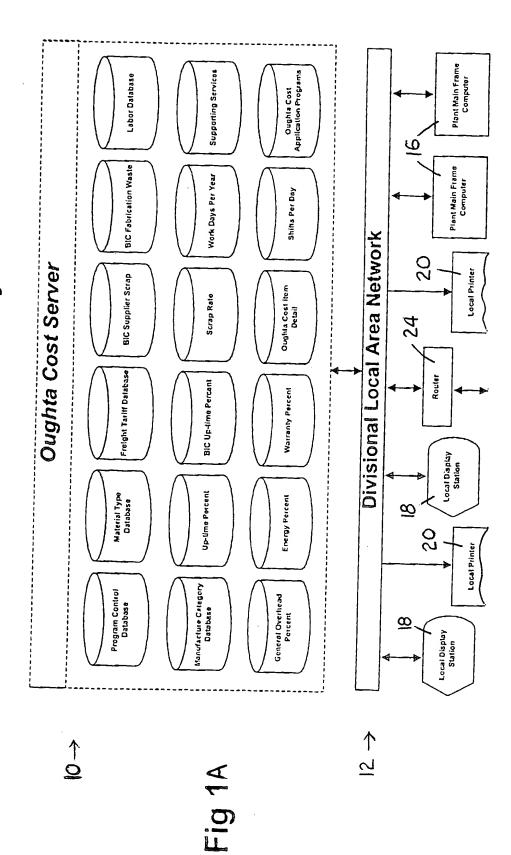
Oughta Cost System



Age 10f19 D-5045

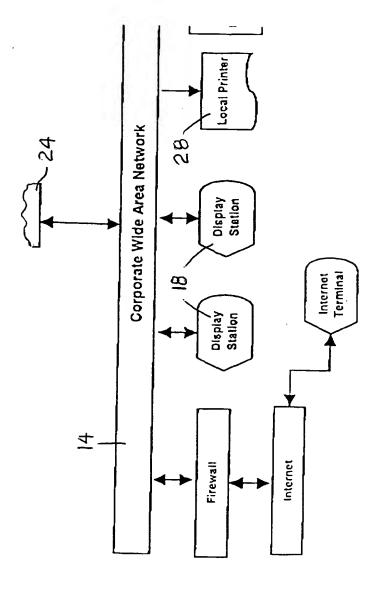


Fig 1B

poge 3 of 19 1 D 5045 4 30 3 Gary Denklau Ray Goss Bill Warren Create New Study Owner Name of New Oughta Cost Study Oughta Cost System Existing Oughta Cost Studies Status Public Private Public Copy An Existing Study New Core Assembly Process Oughta Cost Search New Crankshaft Machine New Head Description New Crankshaft 10292000002 01222001004 01122000001 Program # Reports Open Study

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North Acces			to portion		page 4 of 14
100 Status: Public	Returnable Containers		Description		
Program # 02010100001 Component: Shaft Component # 100 Status: Public ap: Steel Forging	ight Needed Ferial Cost \$ S		Category		i.
Material Type Supplier Scrap: Steel Forging Fahrication Waster Circ Politics	क्षिक क्षिक्र है	ple	Material Code. Unit of Measure Ca		
Material Material Type Supplier Scrap:		Materials Table	Material Code	Comments	

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				page 5 of 19
Returnable Containers Dunnage		Description		
ight Needed Returnable Contact of the contact of			Steel Forging	 शिका
		Cafegory	Forging	
ap: Vaste: 5.00% 5.10% 5.30% 5.30% 5.50% 5.50% 5.60% 5.80% 5.90%	O)	Material Code Unit of Measure	Ton	Comments
Material Type Supplier Scrap: Fabrication Waste: Crigin Origin Mode	Materials Table	Material Code	1-112-A	Comments

F164

Material Type Supplier Scrap: Freight Origin Destination Materials Table T-112-A Comments							
Supplier Scrap. 5 00% • Freight Fabrication Waste. 5 00% • Freight Fight Scrap. 5 00% • Origin Scrap. 5 30% erial Cost \$ \$ Origin Scrap. 5 30% erial Cost \$ Mode Scrap. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	×	Material Type	Steel Forging	印 表			
Freight 5.00% Freight 5.00% Origin 5.30% Origin 5.50% Mode 0.0% Materials Table Materials Code Unit of Measure Category Comments Comments		Supplier Scrap:	2.00%	I.			
Freight 5.00% 19.00% 1	st Components	Fabrication Waste:		F			
Freight 5.10% ight Needed Returnable Containers Origin 5.20% erial Cost \$ Destination 5.60% lost \$ Mode 0% lost \$ Materials Table Rates/CWT \$ Materials Table Forging Steel Forging 1-112-A Ton Forging Steel Forging	Material Capital		5.00%				
Origin 5.30% light Needed Returnable Containers Destination 5.40% erial Cost \$ Mode 5.50% ost \$ Materials Table Rates/CVVT \$ Material Code Unit of Measure Category Description 1-112-A Ton Forging Steel Forging	Labor	.	5.10%				
Destination 5.50% 0.5.50% 0.5t erial Cost \$ Dunnage Mode 0.0% 0.0st \$ Steel Forging Description Materials Table Category Description 1-112-A Ton Forging Steel Forging	wanthactumiy Overhead		5.30%	ight Needed		Returnable Containers [
Mode 0% Steel Forging Steel Forging Steel Forging Comments Steel Forging Steel F	ports		5.40% 5.50%			Dunnage Dunnage	
Materials Table Material Code Unit of Measure Category Description 1-112-A Ton Forging Steel Forging	me t		0%				
Materials Table Material Code Unit of Measure Category Description 1-112-A Ton Forging Steel Forging			Rates				
Materials Table Category Description 1-112-A Ton Forging Steel Forging						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Materials Table Category Description 1-112-A Ton Forging Comments **							
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Material Code Unit of Measure Category Description 1-112-A Ton Forging Steel Forging Comments							
1-112-A Ton Forging Steel Forging Comments		Material Code Un.	if of Measure	Cafegory			
Comments		1-112-A	Ton	Forging	Steel Forging		
Comments							
		Comments					
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FIG 5

	Sieel Furging	e Steel Forging
Supplier Scrap: 5.00%	FI	
Fabrication Waste: 5.00%	F	Section 1
Freight		Ass.
Origin New York	Total Weight Needed [11]	T Returnable Containers
Destination Califorinia	Total Material Cost	Company
Mode	Freight Cost \$	100
k Load s Than Truck	Rates/CWT	
Boat		
Materials Table		
Material Code Unit of Measure	ssure Category	Description
1-112-A Ton	Forging	Steel Forging
Comments		
;	4 F	
The second secon		

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No. and					<u> </u>	્રેક્ટ પ્રદેશ		Page 8 of 19	25045
	e Steel Forging ap: 5.00% Vaste: 5.00%	Returnable Containers		Description	Steel Forging	Crankshaft for 2003 model year V8			
104 Component Chart		Total Weight Needed 111 Total Material Cost \$ 51.06 Freight Cost \$ 1.11 Rates/CWT \$ 1.00		Cafegory	Forging			nent.	
rogram # 02010100	Steel Forging p: 5.00% aste: 5.00%	PEF	ole	Material Code Unit of Measure	· Fon			as only one component.	
F	Material Type Steel Steel Steel Supplier Scrap. 5.00% Fabrication Waste. 5.00%	Freight Origin Destination California Mode Truck Loa	Materials Table	Material Code	1-112-A		Comments	This study has	
Material	Cost Components -Material -Capital	-Labor -Manufacturing -Overhead Reports Home Exit							

F1G 7

		Employee Benefits		\$5.50	\$ 3.50	\$ 3.50		\$ 4.00	\$ 4.00	\$4.00	\$ 3.50	\$ 3.00	\$4.00	\$ 4.50
Region: North		Employee Benefit E (% of Labor Rate)		\$ % 05	% L	8		*	8	8	8	* *	8	8
Region: North		Default Labor Rate		\$ 11.00	\$[11.00	\$ 00.00	***************************************	\$ 8.00	\$11.00	\$18.00	\$ 7.00	\$ 6.00	\$ 8.00	\$19.00
•	1	Operation # (OP #)			20			10	30	90	10		20	20
rices: 0%	r\$: 0.00	Number Required		<u>_</u>	3	0_		5:	2.	2		.25	.25	.25
Supporting Services: 0% V	Additional Labor \$:	Emplayee Type	DIRECT LABOR	Machine Operators	Machine Operators	Assembly Test	MNIRECT I ABOR	Material Handling	Shipping	Receiving	Line Stocking	Material Scheduler	Inspection	Quality

F16 8

lic	Capital \$ \$ \$200,000		Tooling \$ Depreciation	\$800 1 yrs		Age 10 of 19 DSD45	- } →
Component: Shaft Component # 123456 Status: Public	Depreciation 30 yrs yrs yrs		Capital \$ Capital Tool	\$25,000			
mponent: Shaft Compo	Item Category Building		Category Cap	Machine Tool • \$		1	
Program # 01122000003 Co	Sion 1	7	Description	Rough Machining Cutters		Comments	
General Capital	Building Expansion	Machining Capital	Qty Op#	10 10	Add Machining Item		Cancel Help

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50% 51% 52% 54% 100% 100% 100% 100% 100% 100% 100% 10	wariuracturing ×	Manufa	Program # 01122000001 Component. Shaft Component # 123456 Status: Public cturing Category Transfertine 31	omponent Shar	* Component # 	123456 ราสณ	ıs: Public	4 3	
Optime Current September 1992 Scrap Rate September 1992 Scrap Rate September 1992 Work Days per Year Work Shifts per Day Work Hours per Shift Component Manufacturing Time Requires Manufacturing Time Capacity Nanufacturing Time Nanufacturing Time Nanufacturing Time Capacity		Barra Burras Burras Barras Bar	_ `	e r				ره ده	
Scrap Rate 51% per 51% per 51% of Survival Strap Rate 51% per 51% per 51% of Survival Strap Rate 51% per 51% of Survival Rate 100% o		Uptime Current	• [S *7.94	
Scrap Rate 51% per 51%	t Components	Uptime World Class						¥	
Volume 52% per 1 100% I 100% Work Bays per Year Work Shifts per Day Work Shifts per Day Work Hours per Shift Component Manufacturing Utilization Requires Manufacturing Time Requires Manufacturing Time F ves F No	laterial	Scrap Rate	<u> </u>					(Alle	
work Days per Year Work Shifts per Day Work Builts per Day Work Shifts per Day Work Shifts per Day Work Builts per Day Work Shifts per Day Work Shift	abor	Volume	52%	per				žť,	
Work Days per Year Work Shifts per Day Work Hours per Shift Component Manufacturing Utilization Manufacturing Time Requires Requires Requires Requires Requires Requires Figure Op # Unit of Capacity Time	lanufacturing		54%					· · · · ·	
Work Shifts per Day Work Shifts per Day Work Hours per Shift Component Manufacturing Utilization Manufacturing Time Requires Manufacturing Time Requires Requires Requires Figure For Institute Capacity Figure For Institute Capacity Figure For Institute Capacity Figure For Institute For Institute Capacity Figure For Institute For Institut	vernead		100%	Manufacturing	Time			isi	
Work Shifts per Day Work Hours per Shift Component Manufacturing Time Manufacturing Time Time Requires Fquipment # Op # Unit of Measure Calculated Calculated Manpower Time Calculated Cape Tho Time Capacity Capacity	96	Work Days per Year						1	
Work Hours per Shift Component Manufacturing Utilization Manufacturing Time Requires Manpower Manpower Fives Fino Fino Fino Fino Fino Fino Fino Fino		Work Shifts per Day						939	
Component Manufacturing Time Manufacturing Time Equipment # Op # Unit of Measure Calculated Manufacturing Time Element Manufacturing Time Element Not Not Measure Calculated Calculated Capacity Notes N		Work Hours per Shift						S.K.	
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Manufacturing Time Calculated Requires Equipment # Op # Unit of Measure Time Calculated Ves No		ıvlarıldı acturing Otilizat	, uoi					416 () 11 - 16 A	
Manufacturing Time Op # Unit of Manufacturing Time Calculated Calculated Capacity Pyes I No Image: Capacity Capacity Capacity I Yes I No Image: Capacity Capacity Image: Capacity Capacity I Yes I No Image: Capacity Capacity Image: Capacity Capacity I Yes I No Image: Capacity Capacity Image: Capacity Capacity								* \$500 	
Requires Equipment # Op # Unit of Manufacturing Time Element Time Calculated Capacity I Yes I No Image: Capacity Capacity Image: Capacity Capacity		Manufacturing Time	4						
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F Yes No Sement Sem		L Yes			F				agello+14
Add Manufacturing Time Element		L Yes No			F				150th
		Add Manufactu	ring Time Elemen	#)
	* .							· • • • • • • • • • • • • • • • • • • •	

FIG 10

Courrent Store S	Manufacturing Category Transfer Line	Iry Transfer Line	ė.	Me ii
70% 100%	Uptime Current			Ase €
70% 75% 9er	Uptime World Class			
75% per	Rate			
90% Aanufacturing Time 95% 100% 100% quipment # Op # Unit of Time Calculated Calculated Capacity Ining Time Element	9	75% 80%		
95% 100% quipment # Op # Unit of Time Calcutated Measure Capacity ing Time Element		85% 90%	fanufacturing Time	٠,
quipment # Op # Unit of Time Calculated Capacity Time Calculated Capacity Time Calculated Capacity Time Time Element	Work Days per Year	95%		** **f*.
quipment # Op # Unit of Time Calculated Capacity Measure Time Capacity	Shifts per Day	800		
ring Time ring Time Equipment # Op # Unit of Time Calculated Capacity o	Work Hours per Shift			36 (186)
uipment # Op # Unit of Time Calcutated Capacity Measure Capacity Ing Time Element	Component Manufacturing Utilizati	on T		
ng Time Equipment # Op # Unit of Time Calculated Capacity Measure Capacity				
Op # Unit of Time Calculated Capacity Measure Time Capacity Time Capacity	Jacturing Time			
enufacturing Time Element		juipment #	Unit of Time	
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Add:Manufacturing Time Element	es 7 No			
. -	Add:Menufactur	ing Time Elemer	- 1	
				•

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Optime Current Cost Components -Material -Capital -Labor -Manufacturing -Overhead Reports -Overhead Reports -Overhead -Control Class -Capital -Capi	50% 90% 5.00% 5.20% 5.30% 5.50% 5.50% 5.50% 5.50%	per vanufacturing Time	e E			
	5.00% 5.10% 5.20% 5.40% 5.50% t 5.70%	per	<u>ii</u>			
	5.00% 5.00% 5.10% 5.40% 5.50% t 5.70%	per	e III.			
	5.10% 5.20% 5.30% 5.40% 5.50% 5.50%	per	a E			
100	5.10% 5.30% 5.30% 5.50% 5.50%	danufacturing Ti	e E			- 1981 AL - 11 (1987)
	5.40% 5.40% 5.50% 5.70% 5.80%	danufacturing Ti	a E			AL-NISE
Work Shifts per I						C. S.
						7 (8
Work Hours per Shift						₹ 50 \$%\$\$
Component Manufacturing Utilization						AND THE SECOND
Manufacturing Time	Time		THE REAL PROPERTY OF THE PARTY			
Requires Manpower	Equipment #	# d0	Unit of Measure	Time	Calculated Capacity	
L Yes L No			F			1.2423
☐ Yes ☐ No			T.			_
☐ Yes ☐ No			•			25045
Add Mani	Add Manufacturing Time Element					

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50% - 90% - 120		Manufacturing Category Transfer Line	eu			cturing Category Transfer Line
90%	Uptime Current	20%				
12345 1234	Uptime World Class	▶ %06				
20,000 per Year	Scrap Rate	%0				
Available Manufacturing Time 240	Volume	20,000	1	-		
Available Manufacturing Time [240] [2] [2] [3] [4] [5] [6] [7] [7] [8] [9] [10] [12] [13]						
tion Fanol Fanol	Mork Dave nor Year	Available	Manufacturing	Time		
tion 2 tion	and	04.7				
ion function for time flement for the flement for the flement for flexible for for function for for function	Work Shifts per Day	5				
ring Time ring Time Equipment # Op # Unit of Time Calculated o 12345 05	Work Hours per Shift	<u></u>				
uipment # Op # Unit of Measure Time Calculated Capacity 12345 05 Time Capacity nin min min hour hour	Component Manufacturing Utilizat	ion T				
luipment # Op # Unit of Measure Time Calculated Capacity 12345 05 Time Capacity sec min min hour ing Time Element hour hour						
Equipment # Op # Unit of Measure Time Calculated Capacity 12345 05 ▼	Manufacturing Time	4				
12345 05		quipment #	% do	Unit of Measure	Time	Calculated
Sec min min hour anufacturing Time Element	Ves No	12345	90			
anufacturing Time Element	L Yes L No			sec		
ement	L Yes			min hour		
	Add Manufactu	ring Time Elemer				

FIG 13

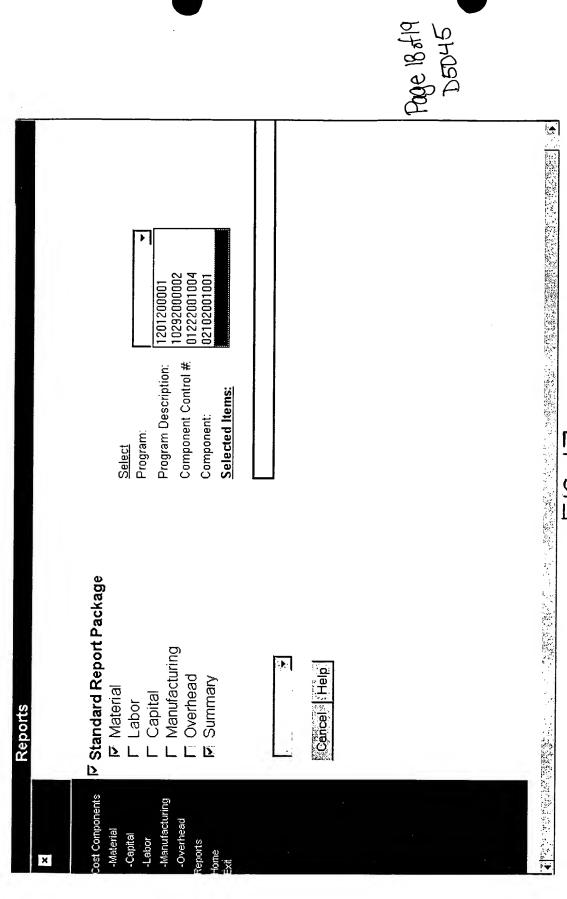
	No.	y sorti			er.		, (1,248		and the second	0	S SOLVE TO THE SOL	ect v. V	P.			86,400	
Program # 01122000001 Component: Shaft Component # 123456 Stafus: Public														Time Calculate	8 08	80 81	1.3	
f: Shaft Componer					Ja Ja		turing Time							Unit of Measure	sec •	> oes	min	The second control of
000001 Componen	Transfer Line	≥0% ←	▶ %06	• %0	20,000 per Year		Available Manufacturing Time	240	2	8	50%			Equipment # Op #	123456 05	246810 10	357159 20	Time Element 🐣 🗽
Program # 01122	Manufacturing Category	Uptime Current	Uptime World Class	Scrap Rate	Volume			Work Days per Year	Work Shifts per Day	Work Hours per Shift	Component Manufacturing Utilization		Manufacturing Time	Requires Manpower	☐ Yes ☞ No	V ves	▼Yes	🎎 🔆 Add Manufacturing, Time
Manufacturing	×	J N	onents	-Material Sc		-Manufacturing	-Overhead		M	W	Cc		Σ	The second secon		Even and the second sec		

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# of Items Total Capital Page 12 and 10 an		_		Domesticki				
\$200,000 30 \$6,667 50% 5334 \$800 \$25,000 5 \$5,000 70% 53,300 \$225,800 \$10,000 \$10,000 \$10,000	Asset Class	# of items	Total Capital	vepreciation Years	Annual Depreciation	Component Rate	Annual Depi Contributed by	reciation Component
#225,800	Building	-	\$200,000	30	29'9\$	20%		\$3,334
#25,000 5 \$5,000 70% \$3,500 \$3,500 \$5,000 \$125,800 \$12,467 \$3,500 \$12,467 \$3,500 \$12,467 \$3,500 \$12,500 \$10,5% \$10,000 \$10,5% \$10	Tooling	10	\$800	.	\$800	100%		\$800
\$225,800	Machine Tools	-	\$25,000	\$	\$5,000	70%		\$3,500
\$225,800 \$12,467 \$7,634 \$20,000			,			8		****
\$20,000 \$10,		TOTALS	\$225,800		\$12,467			
es 0.1%	Startup Cos	sts		\$20,00	l _o			
es	Engineering	g Support	<u>L</u>	\$10,00	l _o			
dditional Expens 0.1% Cost Desd 0.3% 0.4% U 4% 0.4% U 5% 0.5% Control Category Category Category F G B Category Categor	Warranty Co	ost (% of S	les)	%				
Cost Desq 0.3%	đ.	Additional		% %				· • • • • • • • • • • • • • • • • • • •
Comments 0.5%	Cost Category	\ \ \		\$ % \$				ocurrence
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Comments F (7 15		F						F
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Comments FIG 15		•						1 •
7	* Add Cost	Category					-	7
			ပိ	mments				
					 		·•	

Asset Class	# of items	Total Capital	Depreciation Years	Annual Depreciation	Component Rate	Annual Depreciation Contributed by Component	reciation Component
Building	-	\$200,000	30	299'9\$	20 %		\$3,334
Tooling	10	\$800	_	\$800	100%		\$800
Machine Tools	-	\$25,000	\$	000'5\$	70%		\$3,500
					8		
	TOTALS	\$225,800		\$12,467			\$7,634
Startup Costs	ţţ	<u>L</u>	\$20,000	le			
Engineering Support	Support	. L_	\$10,000	le			
Warranty Cost (% of Sal	ost (% of S	. (sə	0.1%				
٩	Additiona	Additional Expenses	***				
Cost Category		Cost Description	tion			Cost (\$) (Occurrence
•	-						F
Pershable Tooling	oling						F
MRO General Overhead	head						9
Energy Other							F
		1					•
		ŏ	Comments				

FIG 16



F16 17

	Pagel96/19 D5045
Select Program: Program Description: Component Control #: Selected Items:	01122000001 New Crankshaft
Reports F Standard Report Package Material C Labor C Capital Manufacturing C Overhead Summary	Print Preview Print Export to Access Export to Excel Inquiries
Cost Components -Material -Capital -Labor -Manufacturing -Overhead Reports -Forme	

FIG 18